

FIGURE 1

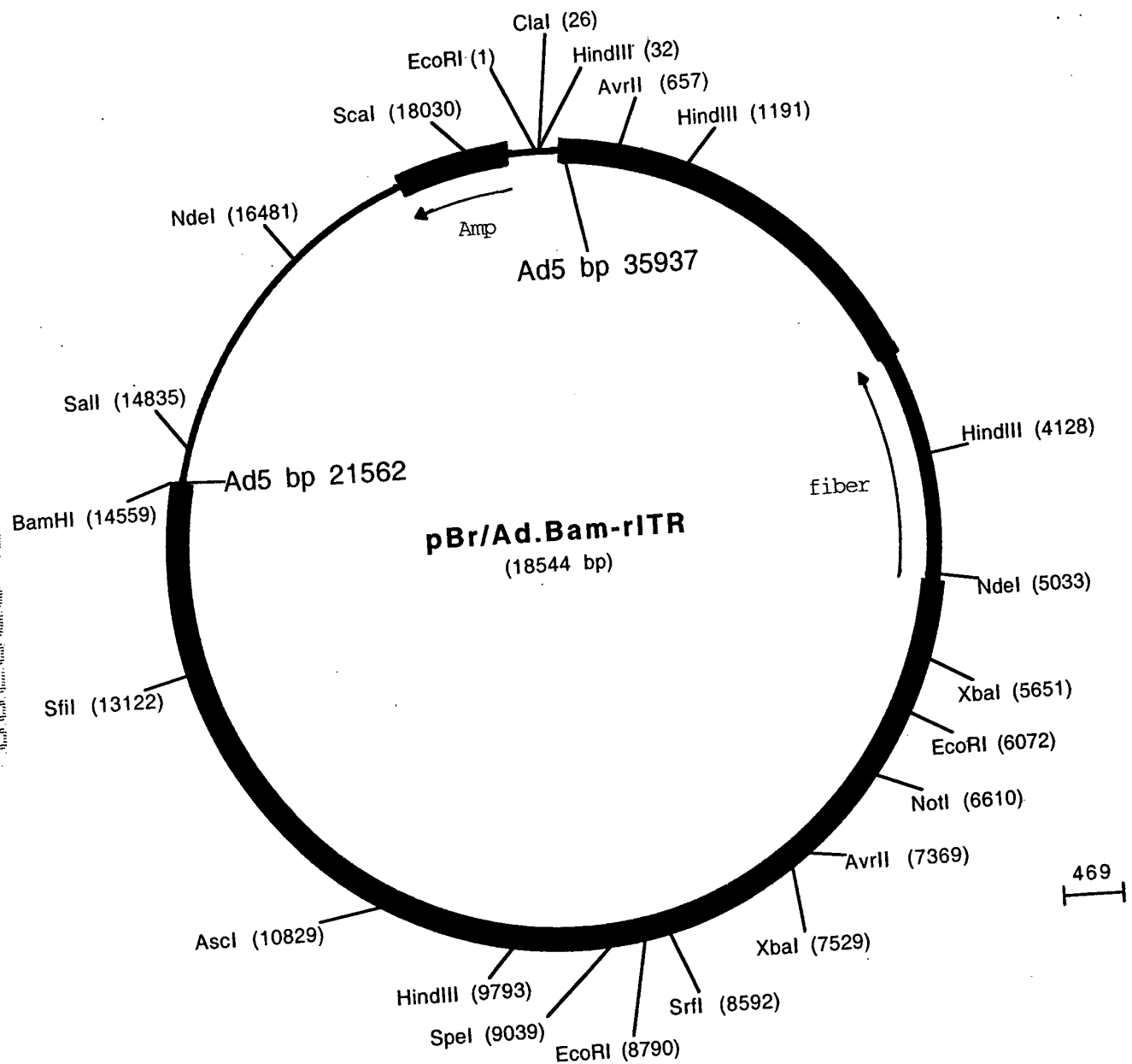


Figure 2

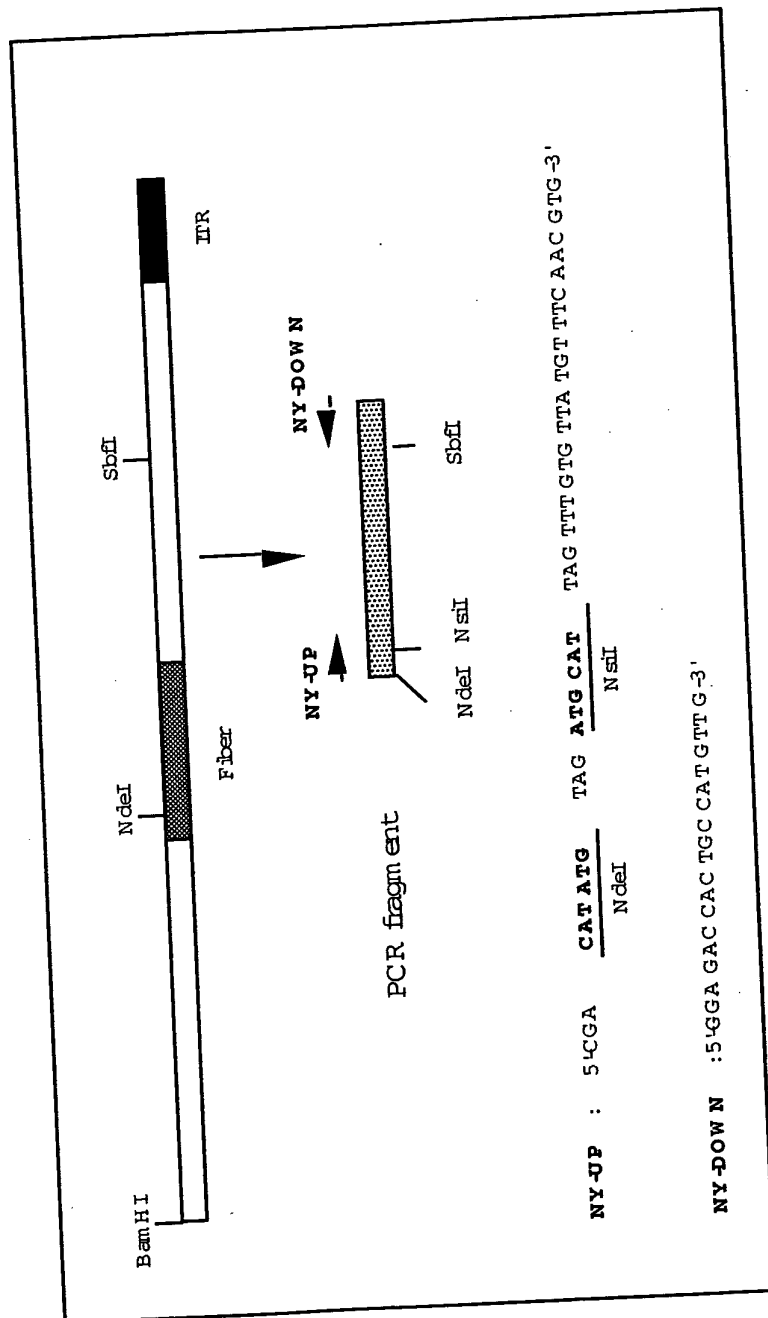
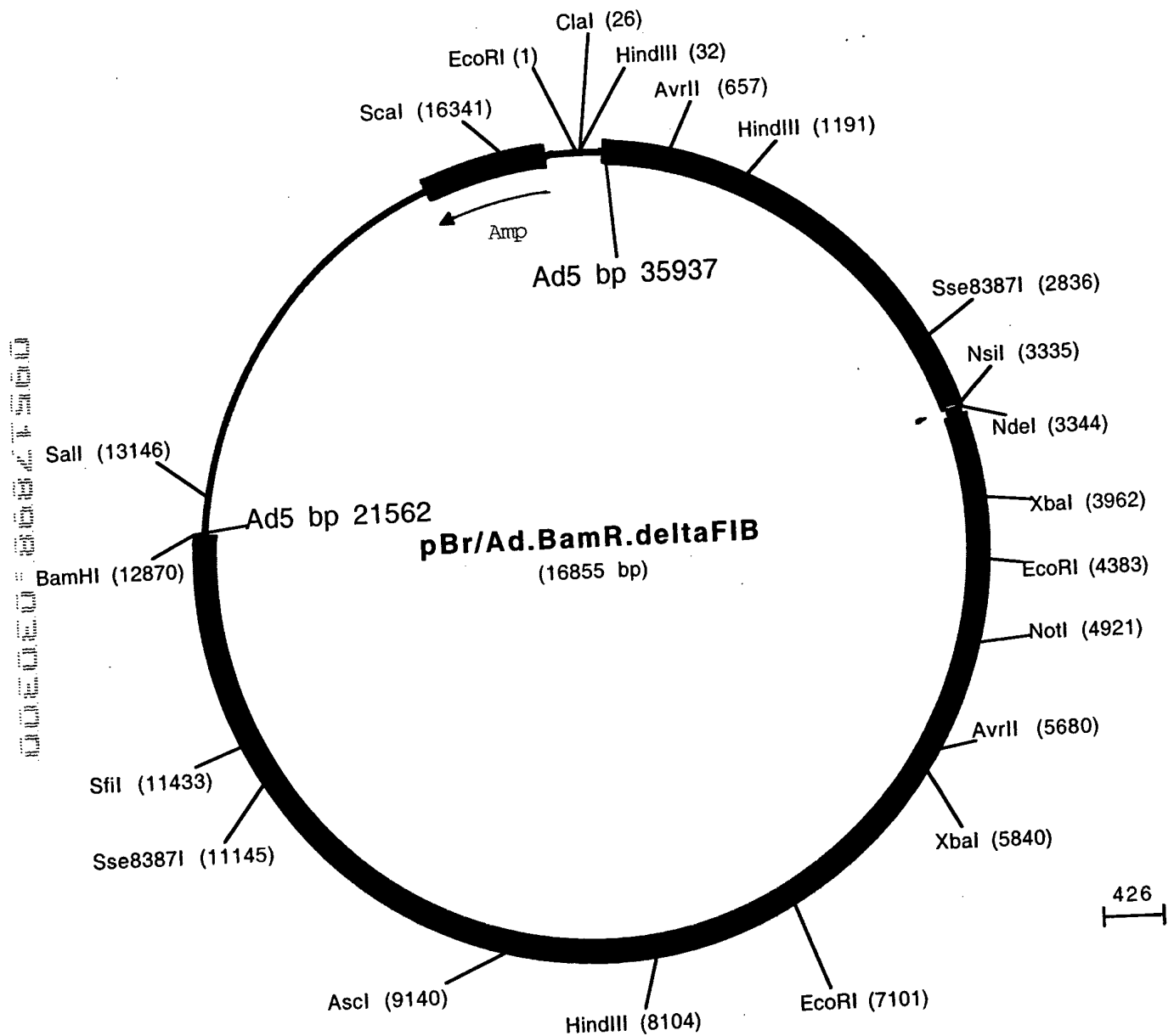


FIGURE 3



[illegible]

ATGAAGCGCGCAAGACCGTCTGAAGATACCTTCAACCCCGTGTATCCATATGAAGATGAAAGCAGCT
CACAACACCCCTTTATAAACCCCTGGTTTCATTTCTCAAATGGTTTTGCACAAAGCCCAGATGGAGT
TCTAACTCTTAAATGTGTTAATCCACTCACTACCGCCAGCGGACCCCTCCAACCTTAAAGTTGGAAGC
AGTCTTACAGTAGATACTATCGATGGGTCTTTGGAGGAAAATATAACTGCCGAAGCGCCACTCACTA
AAACTAACCCTCCATAGGTTTATTAATAGGATCTGGCTTGCAAACAAAGGATGATAAACTTTGTTT
ATCGCTGGGAGATGGGTTGGTAACAAAGGATGATAAACTATGTTTATCGCTGGGAGATGGGTAAATA
ACAAAAATGATGTACTATGTGCCAAACTAGGACATGGCCTTGTGTTTGACTCTTCCAATGCTATCA
CCATAGAAAAACAACACCTTGTGGACAGGCGCAAAACCAAGCGCCAACCTGTGTAATTAAAGAGGGAGA
AGATTCCCCAGACTGTAAGCTCACTTTAGTTCTAGTGAAGAATGGAGGACTGATAAATGGATACATA
ACATTAATGGGAGCCTCAGAATATACTAACACCTTGTTTAAAAACAATCAAGTTACAATCGATGTAA
ACCTCGCATTTGATAATACTGGCCAAATTATTACTTACCTATCATCCCTTAAAGTAACCTGAACCT
TAAAGACAACCAAAACATGGCTACTGGAACCATAACCAAGTGCCAAAGGCTTCATGCCCAGCACCACC
GCCTATCCATTTATAACATACGCCACTGAGACCCTAAATGAAGATTACATTTATGGAGAGTGTTACT
ACAAATCTACCAATGGAACCTCTCTTTCCACTAAAAGTTACTGTCACTAAACAGACGTATGTTAGC
TTCTGGAATGGCCTATGCTATGAATTTTTCATGGTCTCTAAATGCAGAGGAAGCCCCGGAAACTACC
GAAGTCACTCTCATTACCTCCCCCTCTTTTTTTCTTATATCAGAGAAGATGACT**TGA**ATGCATTAG

SECRET

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SECRET

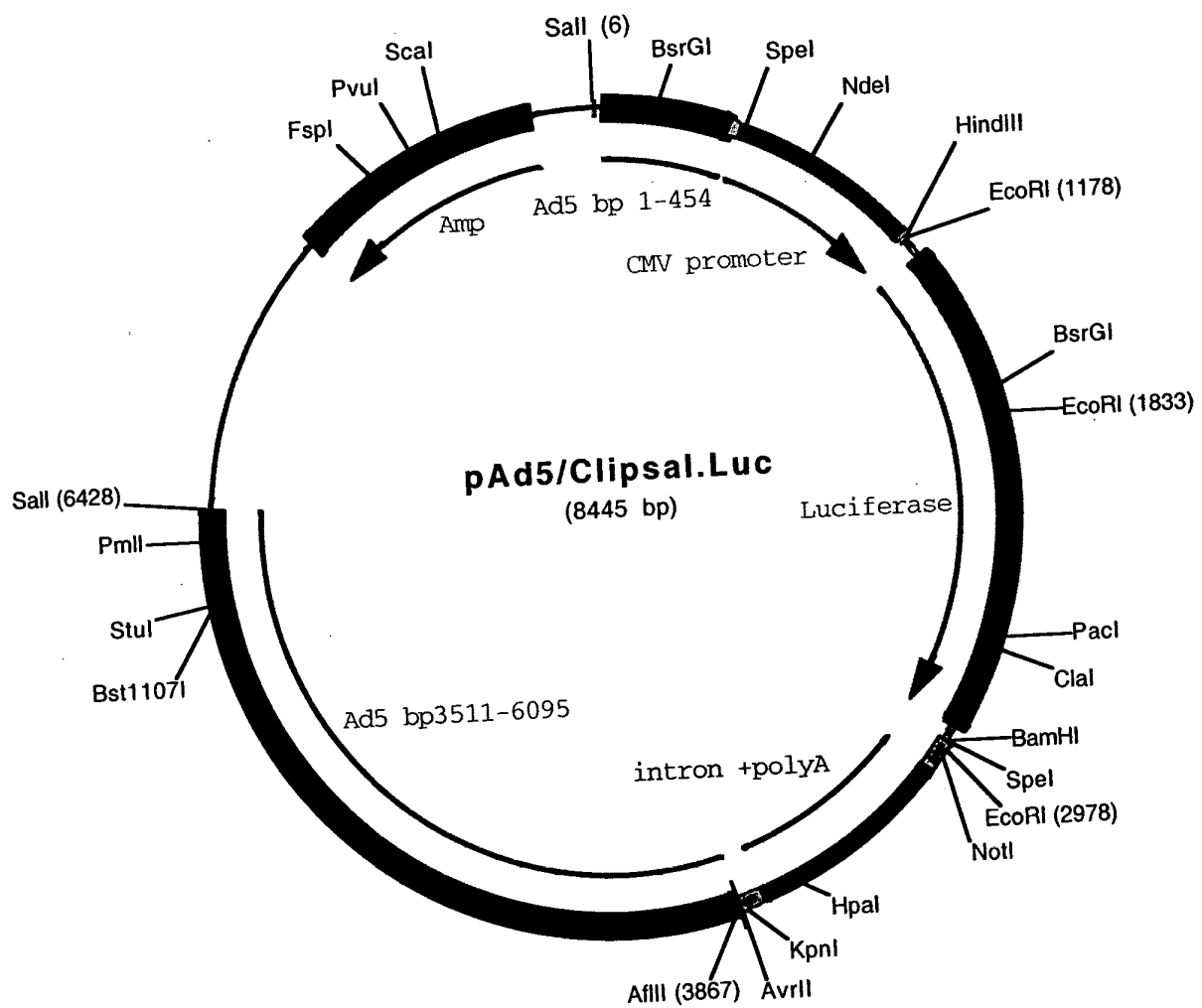
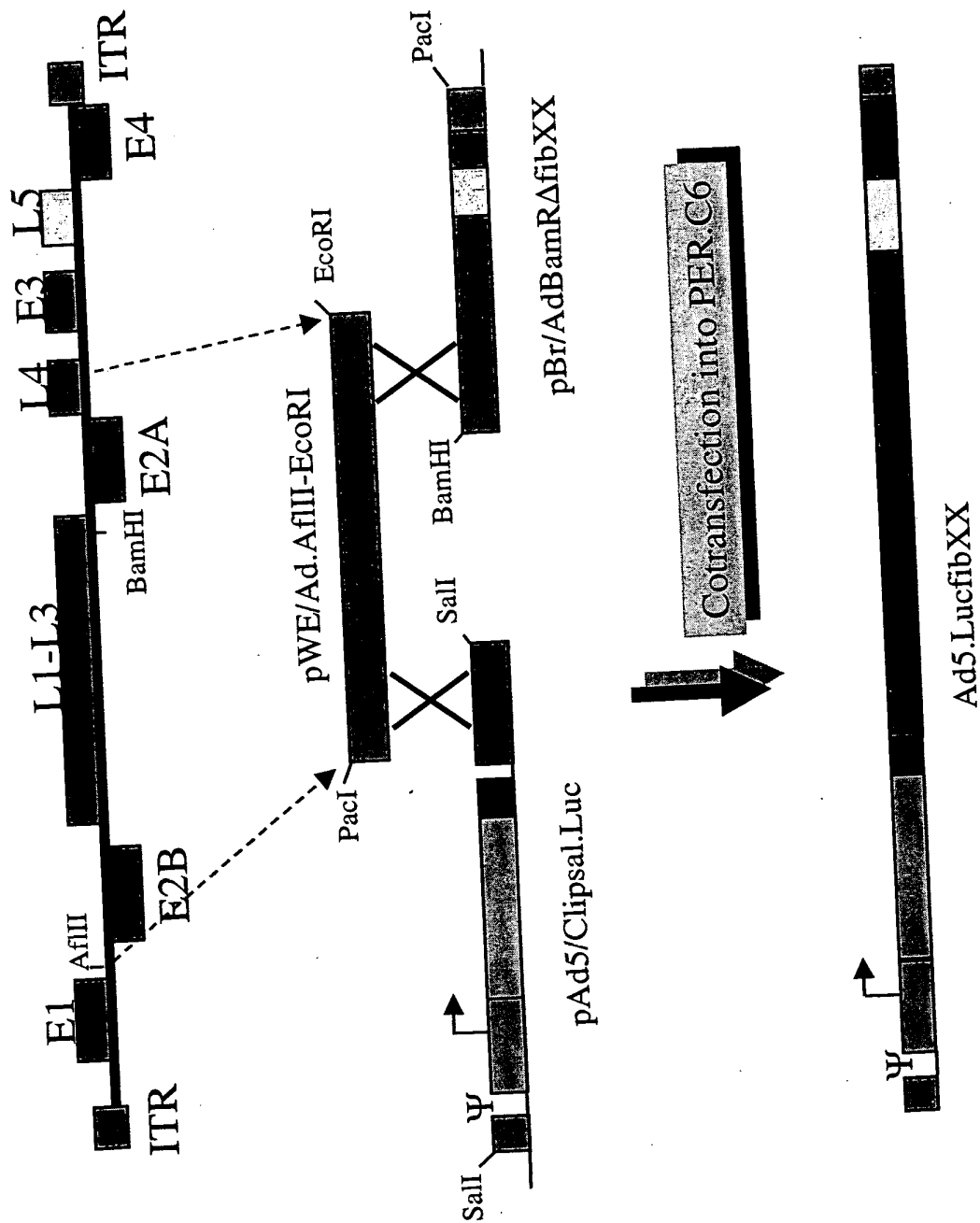


Figure 6: Generation of (chimaeric) adenoviruses



Alignment Report of alignment.DNA, using Clustal met
 Wednesday, March 31, 1999 18:13

Weighted residue weight table.

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1  ATGGC-CAAACGAGCTCGGCTAAGCAGCTCCTTCAATCCGGTCTACCCCT Fiber 16 Genbank
1  ATG[AAG]C[GCG]C[A]AG[A]C[G]TCT[G]A[A-GAT]A[CCTTCA][C][C][G]T[G]T[A][T]C[C][A]T Ad5/16 Fiber DNA

50  ATGAAGATGAAAGCAGCTCACAAACACCCCTTTATAAACCCCTGGTTTCATT Fiber 16 Genbank
50  ATGAAGATGAAAGCAGCTCACAAACACCCCTTTATAAACCCCTGGTTTCATT Ad5/16 Fiber DNA

100 TCCTCAAATGGTTTTTGCACAAAGCCCAGATGGAGTTCTAACTCTTAAATG Fiber 16 Genbank
100 TCCTCAAATGGTTTTTGCACAAAGCCCAGATGGAGTTCTAACTCTTAAATG Ad5/16 Fiber DNA

150 TGTTAATCCACTCACTACCGCCAGCGGACCCCTCCAACCTTAAAGTTGGAA Fiber 16 Genbank
150 TGTTAATCCACTCACTACCGCCAGCGGACCCCTCCAACCTTAAAGTTGGAA Ad5/16 Fiber DNA

200 GCAGTCTTACAGTAGATACTATCGATGGGTCTTTGGAGGAAAATATAACT Fiber 16 Genbank
200 GCAGTCTTACAGTAGATACTATCGATGGGTCTTTGGAGGAAAATATAACT Ad5/16 Fiber DNA

250 GCCG[C]AGCGCCACTCACTAAAACCTAACCCTCCATAGGTTTATTAATAGG Fiber 16 Genbank
250 GCCG[A]AGCGCCACTCACTAAAACCTAACCCTCCATAGGTTTATTAATAGG Ad5/16 Fiber DNA

300 ATCTGGCTTGCAAACAAAGGATGATAAACTTTGTTTATCGCTGGGAGATG Fiber 16 Genbank
300 ATCTGGCTTGCAAACAAAGGATGATAAACTTTGTTTATCGCTGGGAGATG Ad5/16 Fiber DNA

350 GGTGTTGTAACAAAGGATGATAAACTATGTTTATCGCTGGGAGATGGGTTA Fiber 16 Genbank
350 GGTGTTGTAACAAAGGATGATAAACTATGTTTATCGCTGGGAGATGGGTTA Ad5/16 Fiber DNA

400 ATAACAAAAAATGATGTACTATGTGCCAAACTAGGACATGGCCTTGTTGTT Fiber 16 Genbank
400 ATAACAAAAAATGATGTACTATGTGCCAAACTAGGACATGGCCTTGTTGTT Ad5/16 Fiber DNA

450 TGACTCTTCCAATGCTATCACCATAGAAAAACAACACCTTGTTGGACAGGCG Fiber 16 Genbank
450 TGACTCTTCCAATGCTATCACCATAGAAAAACAACACCTTGTTGGACAGGCG Ad5/16 Fiber DNA

500 CAAAACCAAGCGCCAACTGTGTAATTAAAGAGGGAGAAAGATTCCCCAGAC Fiber 16 Genbank
500 CAAAACCAAGCGCCAACTGTGTAATTAAAGAGGGAGAAAGATTCCCCAGAC Ad5/16 Fiber DNA

550 TGTAAGCTCACTTTAGTTCTAGTGAAGAATGGAGGACTGATAAATGGATA Fiber 16 Genbank
550 TGTAAGCTCACTTTAGTTCTAGTGAAGAATGGAGGACTGATAAATGGATA Ad5/16 Fiber DNA

600 CATAACATTAATGGGAGCCTCAGAATATACTAACACCTTGTTTAAAAACA Fiber 16 Genbank
600 CATAACATTAATGGGAGCCTCAGAATATACTAACACCTTGTTTAAAAACA Ad5/16 Fiber DNA

650 ATCAAGTTACAATCGATGTAAACCTCGCATTTGATAATACTGGCCAAATT Fiber 16 Genbank
650 ATCAAGTTACAATCGATGTAAACCTCGCATTTGATAATACTGGCCAAATT Ad5/16 Fiber DNA

700 ATTACTTACCTATCATCCCTTAAAGTAACCTGAACTTTAAAGACAACCA Fiber 16 Genbank
700 ATTACTTACCTATCATCCCTTAAAGTAACCTGAACTTTAAAGACAACCA Ad5/16 Fiber DNA

750 AAACATGGCTACTGGAACCATAAACCAGTGCCAAAGGCTTCATGCCCAGCA Fiber 16 Genbank
750 AAACATGGCTACTGGAACCATAAACCAGTGCCAAAGGCTTCATGCCCAGCA Ad5/16 Fiber DNA

800 CCACCGCCTATCCATTTATAACATACGCCACTGAGACCCTAAATGAAGAT Fiber 16 Genbank
800 CCACCGCCTATCCATTTATAACATACGCCACTGAGACCCTAAATGAAGAT Ad5/16 Fiber DNA

850 TACATTTATGGAGAGTGTTACTACAAATCTACCAATGGAACCTCTCTTTCC Fiber 16 Genbank
850 TACATTTATGGAGAGTGTTACTACAAATCTACCAATGGAACCTCTCTTTCC Ad5/16 Fiber DNA

900 ACTAAAAGTTACTGTACACTAAACAGACGTATGTTAGCTTCTGGAATGG Fiber 16 Genbank
900 ACTAAAAGTTACTGTACACTAAACAGACGTATGTTAGCTTCTGGAATGG Ad5/16 Fiber DNA

950 CCTATGCTATGAATTTTTTCATGGTCTCTAAATGCAGAGGAAGCCCCGGAA Fiber 16 Genbank
950 CCTATGCTATGAATTTTTTCATGGTCTCTAAATGCAGAGGAAGCCCCGGAA Ad5/16 Fiber DNA

1000 ACTACCGAAGTCACTCTCATTACCTCCCCCTTCTTTTTTTCTTATATCAG Fiber 16 Genbank
1000 ACTACCGAAGTCACTCTCATTACCTCCCCCTTCTTTTTTTCTTATATCAG Ad5/16 Fiber DNA

1050 AGAAGATGACTGA Fiber 16 Genbank
1050 AGAAGATGACTGAATGCATTAGTTTGTGTTATGTTTCAACGTGTTTATTT Ad5/16 Fiber DNA

1062 Fiber 16 Genbank
1100 TCAATTG Ad5/16 Fiber DNA

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Decoration 'Decoration #1': Box residues that differ from Fiber 16 Genbank.

Alignment Report of alignment.prot, using [] method with PAM250 residue weight tab.
 Wednesday, March 31, 1999 16:19

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1  MAKRARLS[S]-SFNPVYPYEDSSSQHPFIN genbank Fiber 16
1  M[KRAR[P]S[EDT]FNPVYPYEDSSSQHPFIN chimeric Ad5/Fib16

30 PGFISSNGFAQSPDGVLTCLKVNPLTTASG genbank Fiber 16
30 PGFISSNGFAQSPDGVLTCLKVNPLTTASG chimeric Ad5/Fib16

60 PLQLKVGSSSLTVDTIDGSLEENITAAAPLT genbank Fiber 16
60 PLQLKVGSSSLTVDTIDGSLEENITAAAPLT chimeric Ad5/Fib16

90 KTNHSIGLLIGSGLQTKDDKLCCLSLG DGLV genbank Fiber 16
90 KTNHSIGLLIGSGLQTKDDKLCCLSL[E]DGLV chimeric Ad5/Fib16

120 TKDDKLCCLSLGDGLITKNDVLC AKLGHGLV genbank Fiber 16
120 TKDDKLCCLSLGDGLITKNDVLC AKLGHGLV chimeric Ad5/Fib16

150 FDSSNAITIENTLWLTGAKPSANCVIKEGE genbank Fiber 16
150 FDSSNAITIENTLWLTGAKPSANCVIKEGE chimeric Ad5/Fib16

180 DSPDCKLTLVLVKN GGLINGYITLMGASEY genbank Fiber 16
180 DSPDCKLTLVLVKN GGLINGYITLMGASEY chimeric Ad5/Fib16

210 TNTLFKNNQVTIDVNLA FDN TGQIIITYLSS genbank Fiber 16
210 TNTLFKNNQVTIDVNLA FDN TGQIIITYLSS chimeric Ad5/Fib16

240 LKSNLNF KDNQNMATGTITSAKGFMPSTTA genbank Fiber 16
240 LKSNLNF KDNQNMATGTITSAKGFMPSTTA chimeric Ad5/Fib16

270 YPFITYATETL NEDYIYGECYYKSTNGTLF genbank Fiber 16
270 YPFITYATETL NEDYIYGECYYKSTNGTLF chimeric Ad5/Fib16

300 PLKVTVT LNRRLASGMAYAMNFSWSLNAE genbank Fiber 16
300 PLKVTVT LNRRLASGMAYAMNFSWSLNAE chimeric Ad5/Fib16

330 EAPETTEVTLITSPFFFSYIREDD genbank Fiber 16
330 EAPETTEVTLITSPFFFSYIREDD chimeric Ad5/Fib16

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Decoration 'Decoration #1': Box residues that differ from genbank Fiber 16 .

FIG. 8

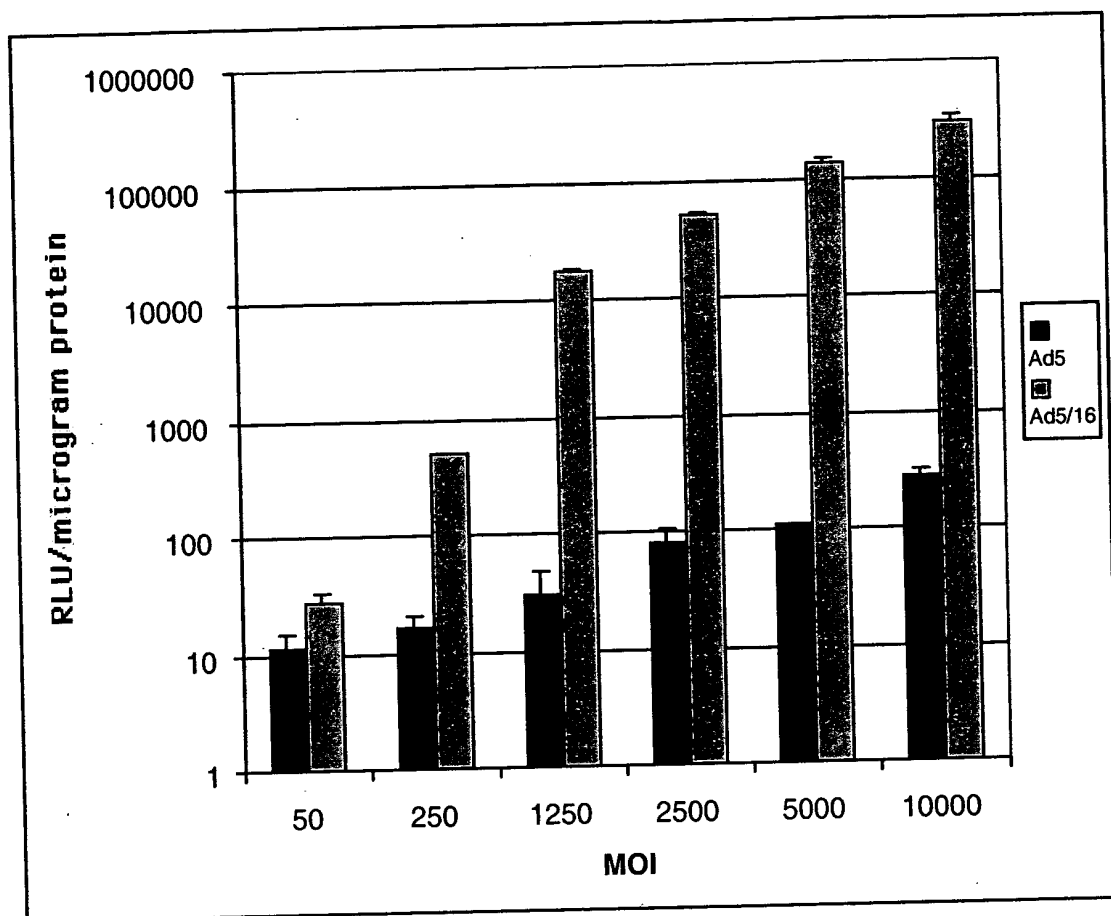


FIG. 9

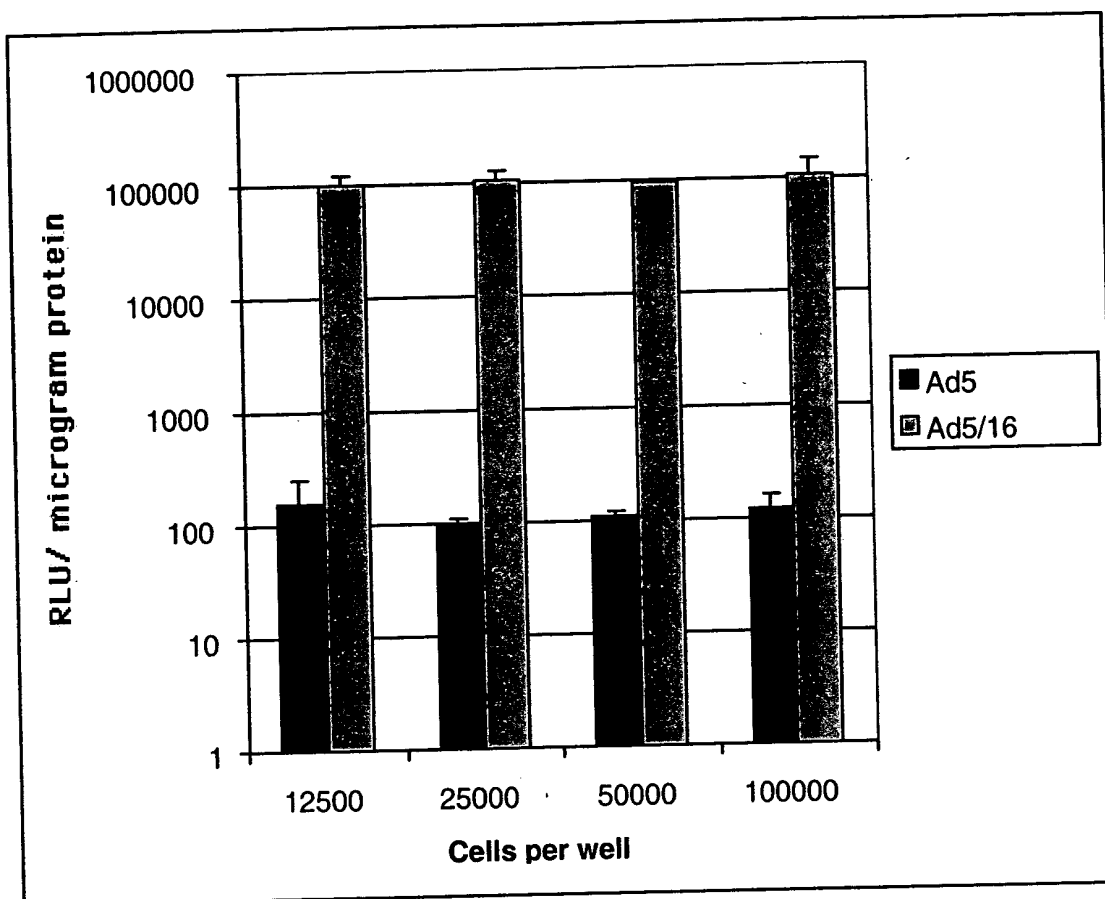


FIG. 10

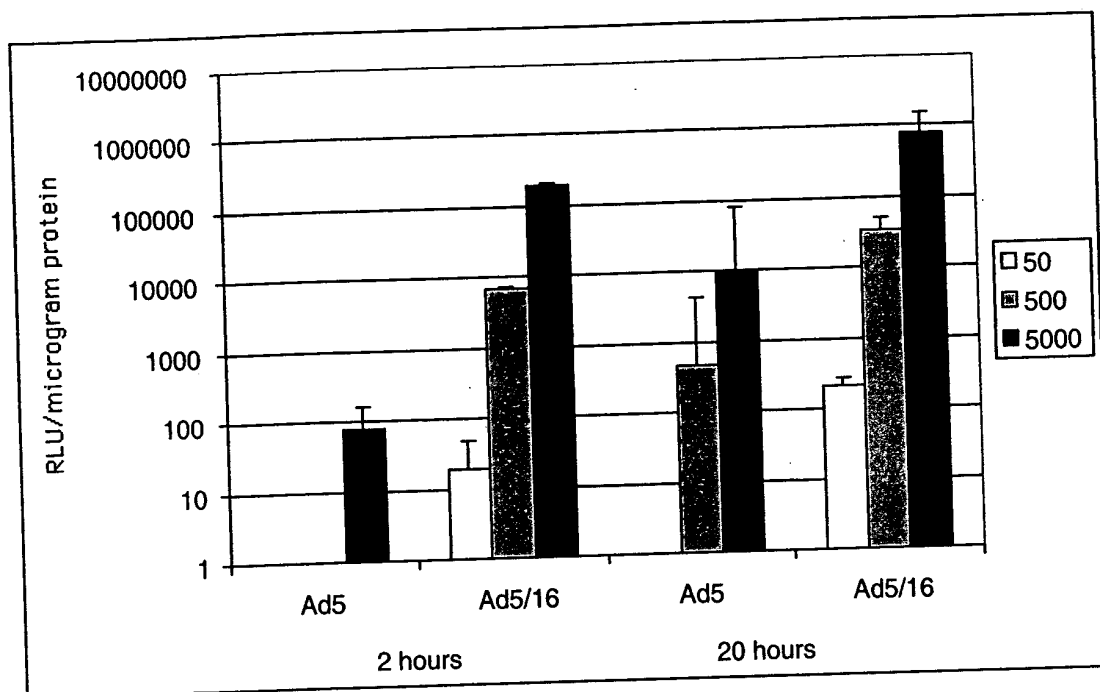


FIGURE 11

Synoviocytes infected with Ad.TK

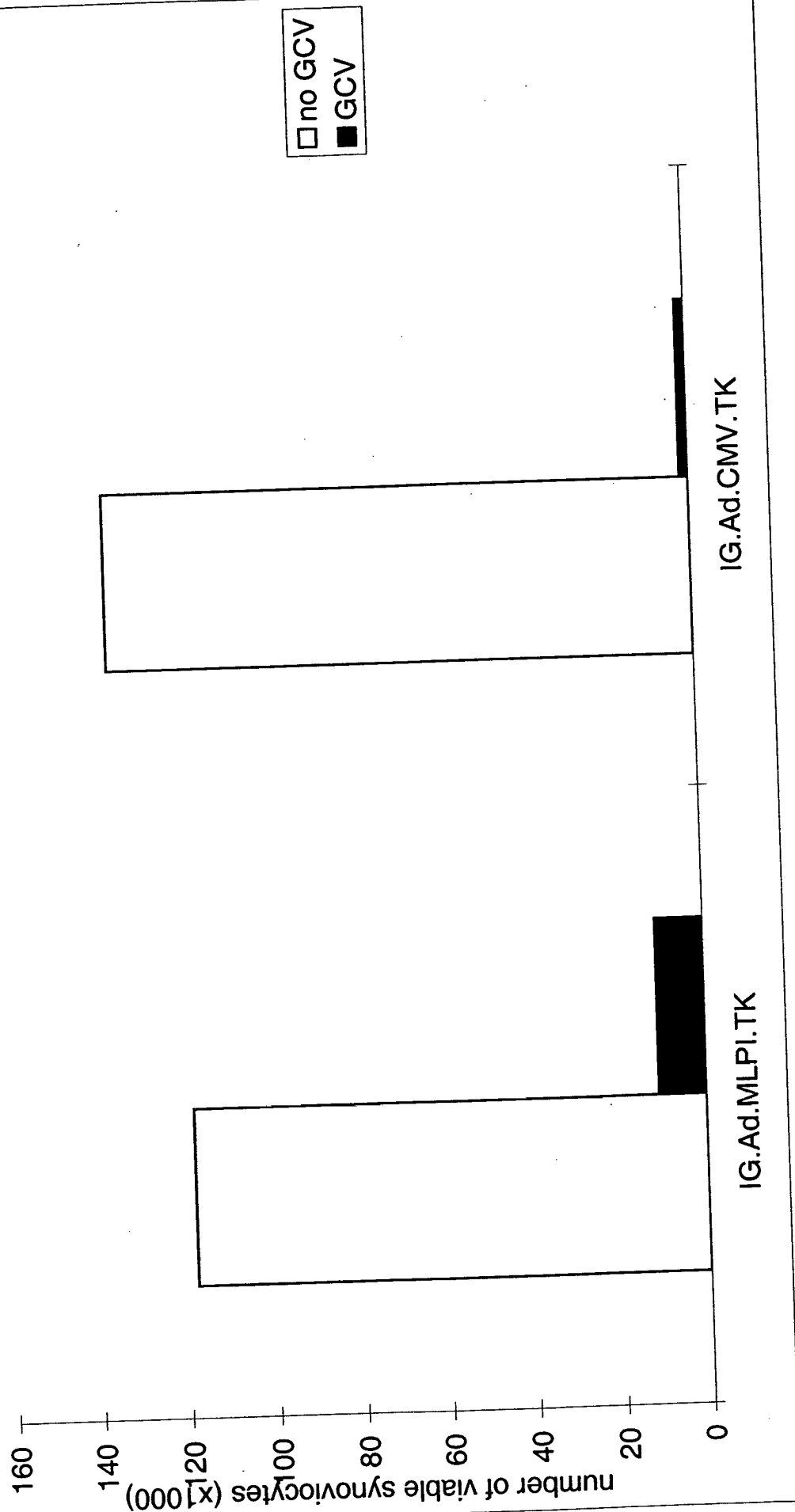


Figure 12

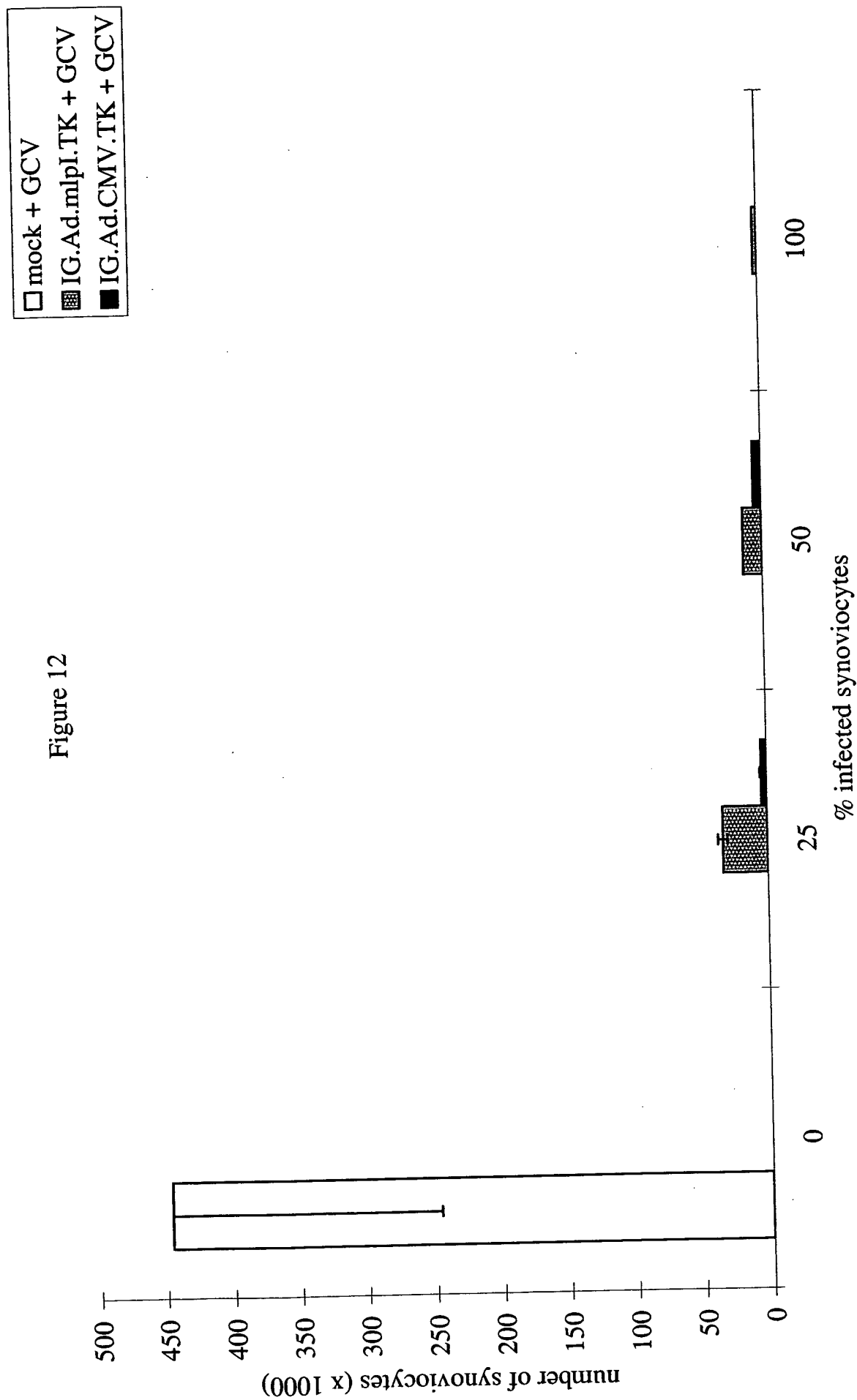


FIGURE 13A

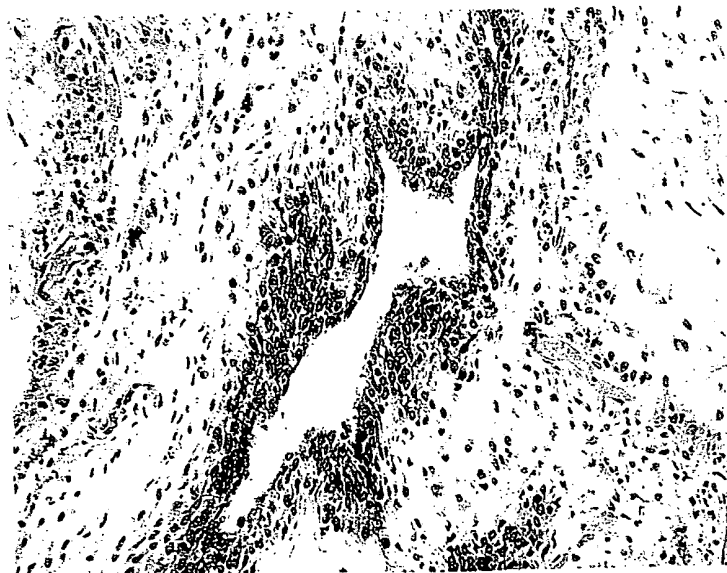
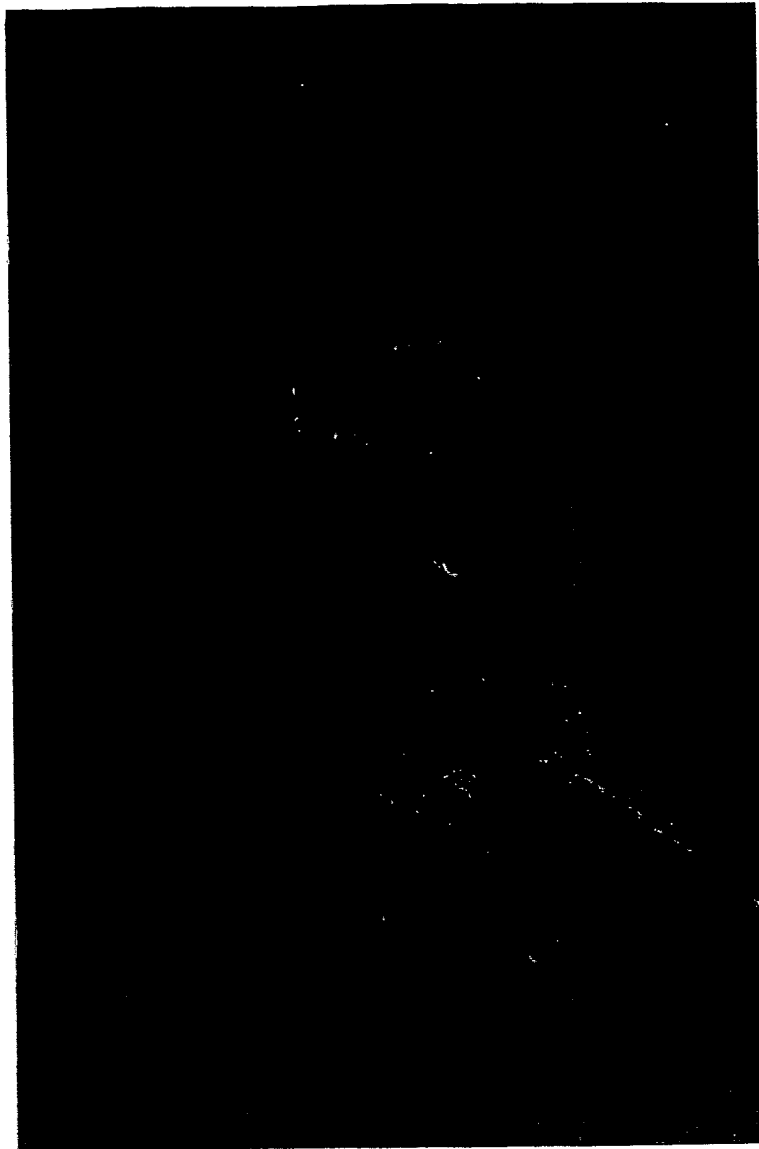


FIGURE 13B

Figure 14: Comparison of infection of Ad5.luc and Ad5.fib16.luc on RA synoviocytes

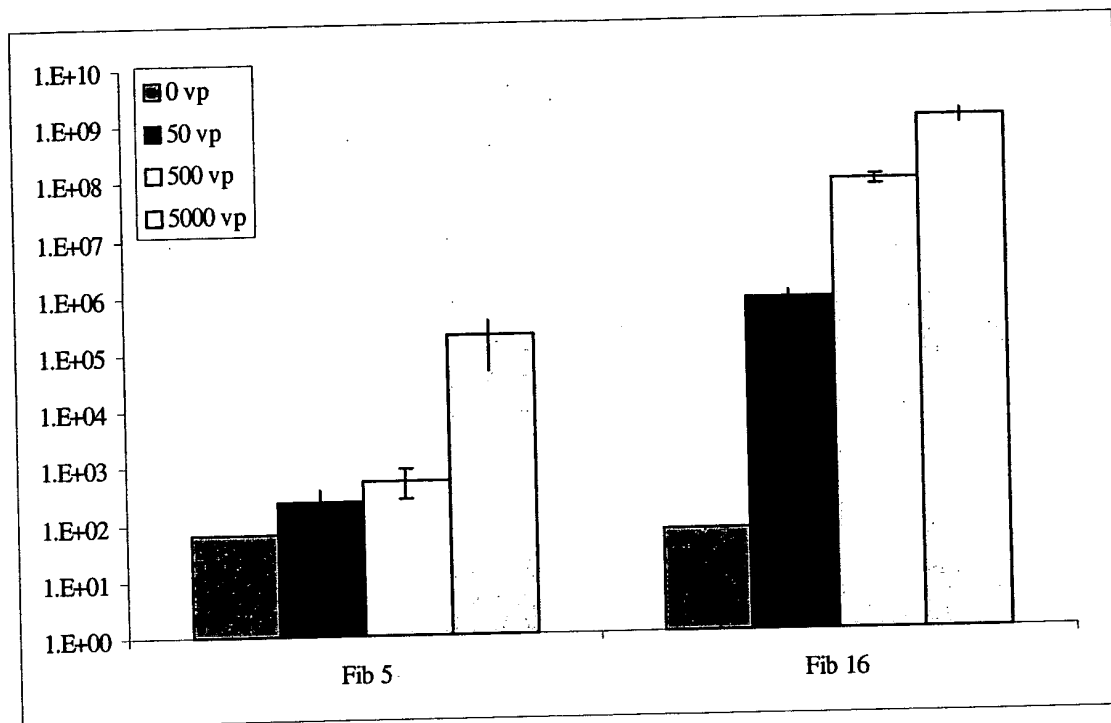


Figure 15

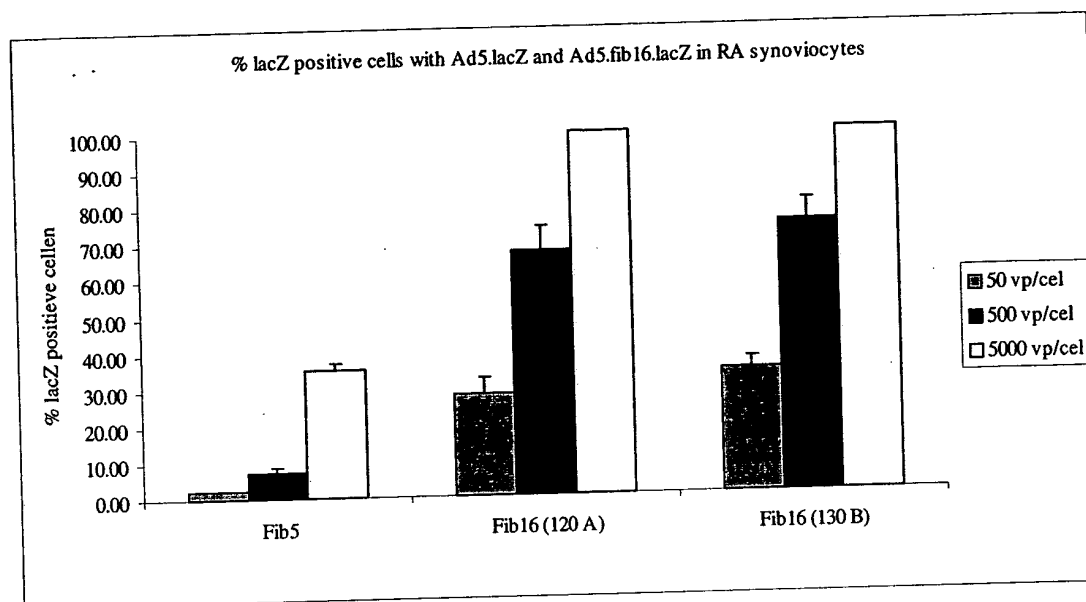


Figure 16A

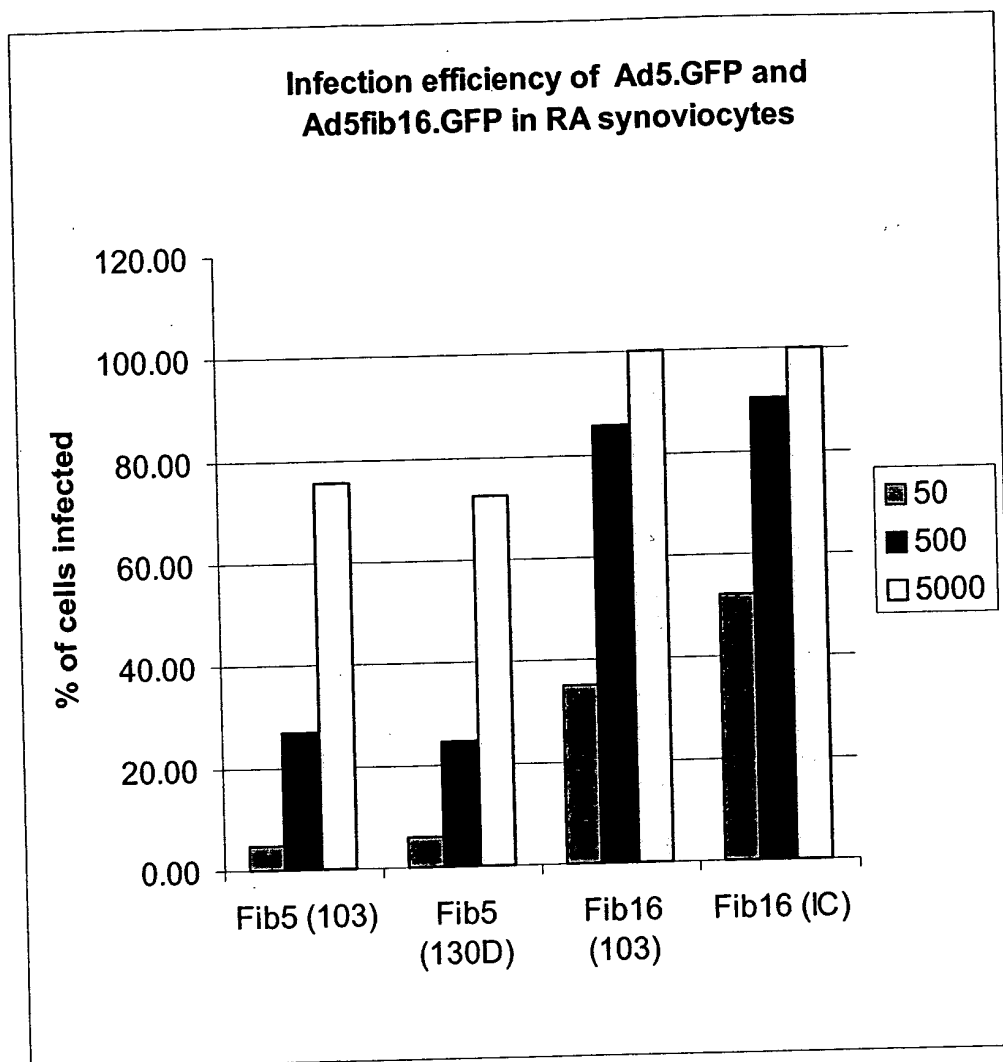


Figure 16B

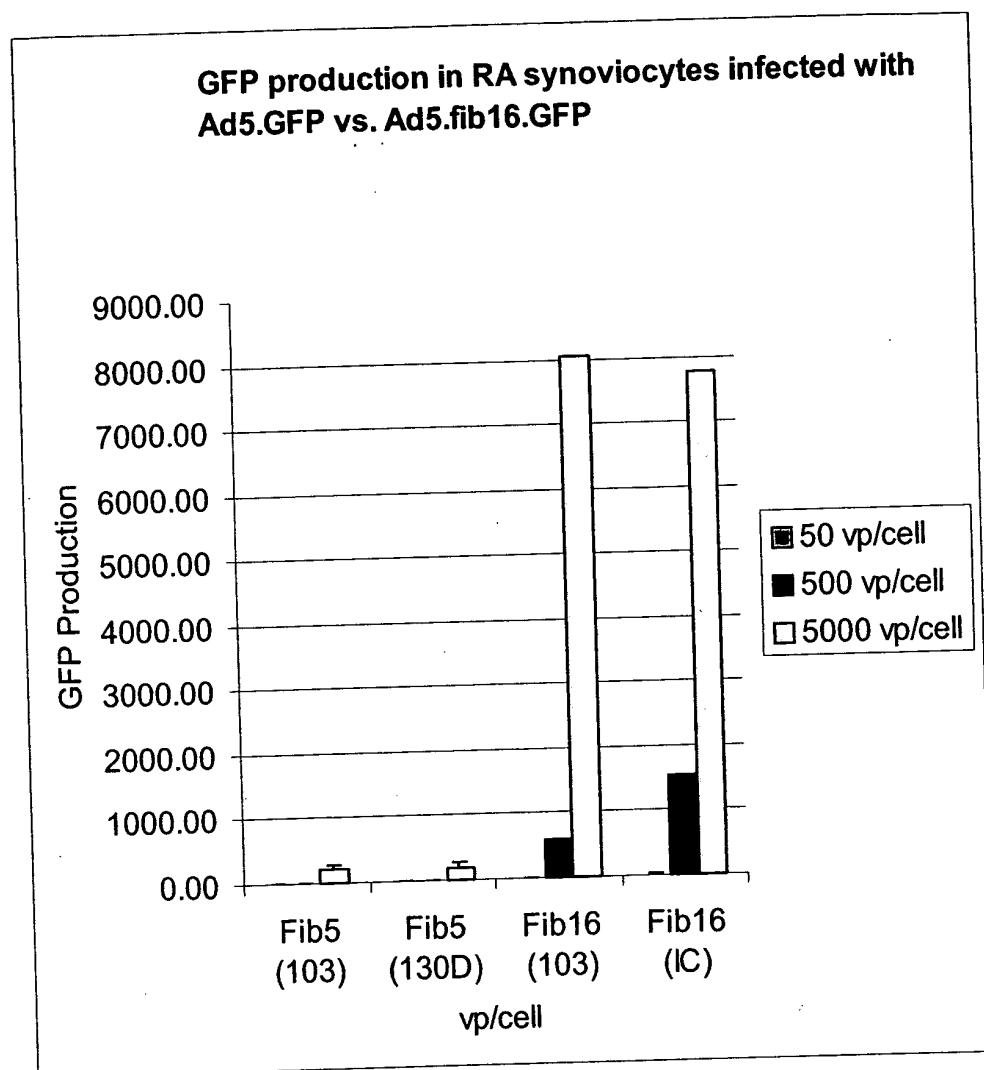


Figure 17: infectivity of panel of chimeric adenoviruses on RA synoviocytes

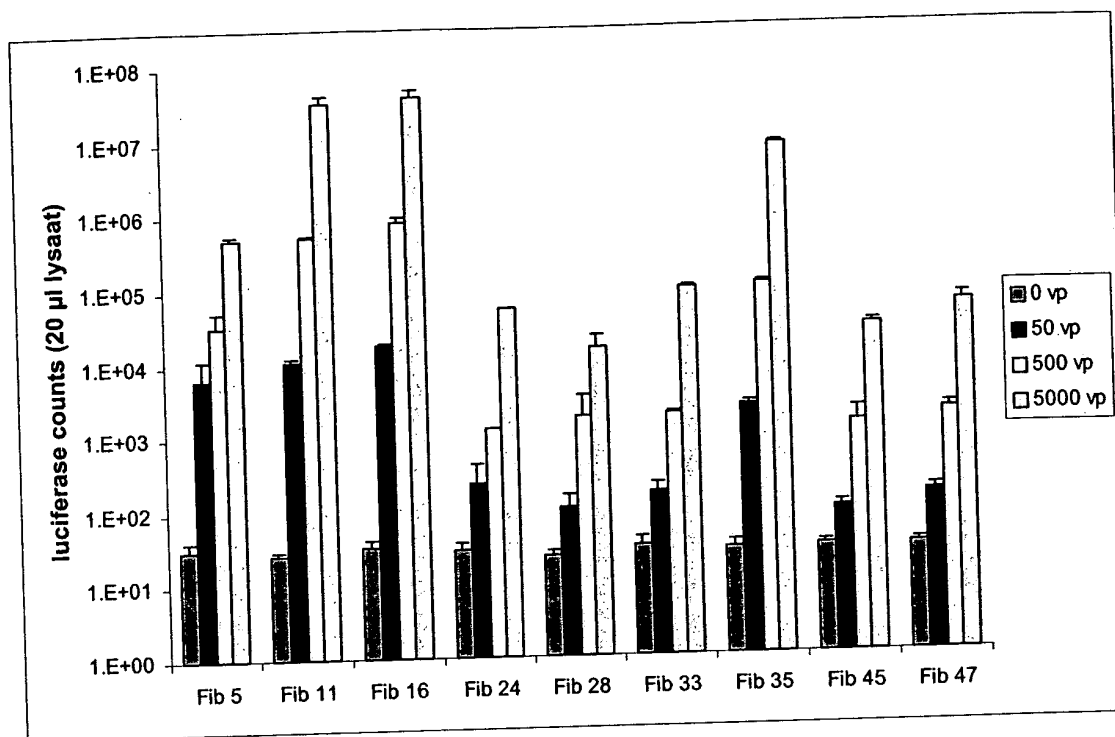


Figure 18A

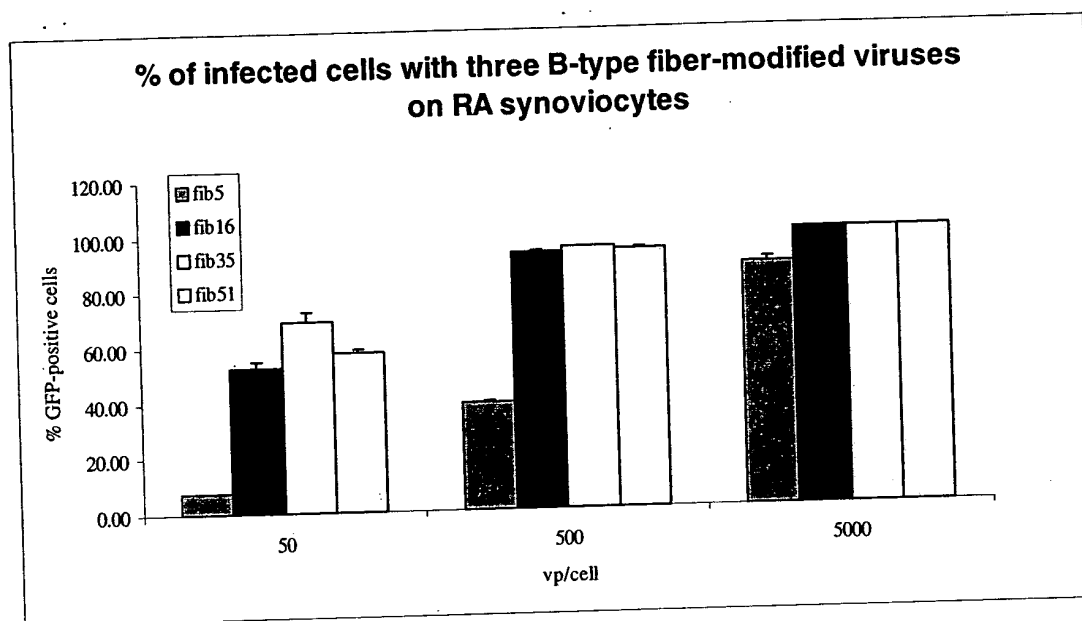


Figure 18B: GFP production with three B-type fiber-modified viruses on RA synoviocytes

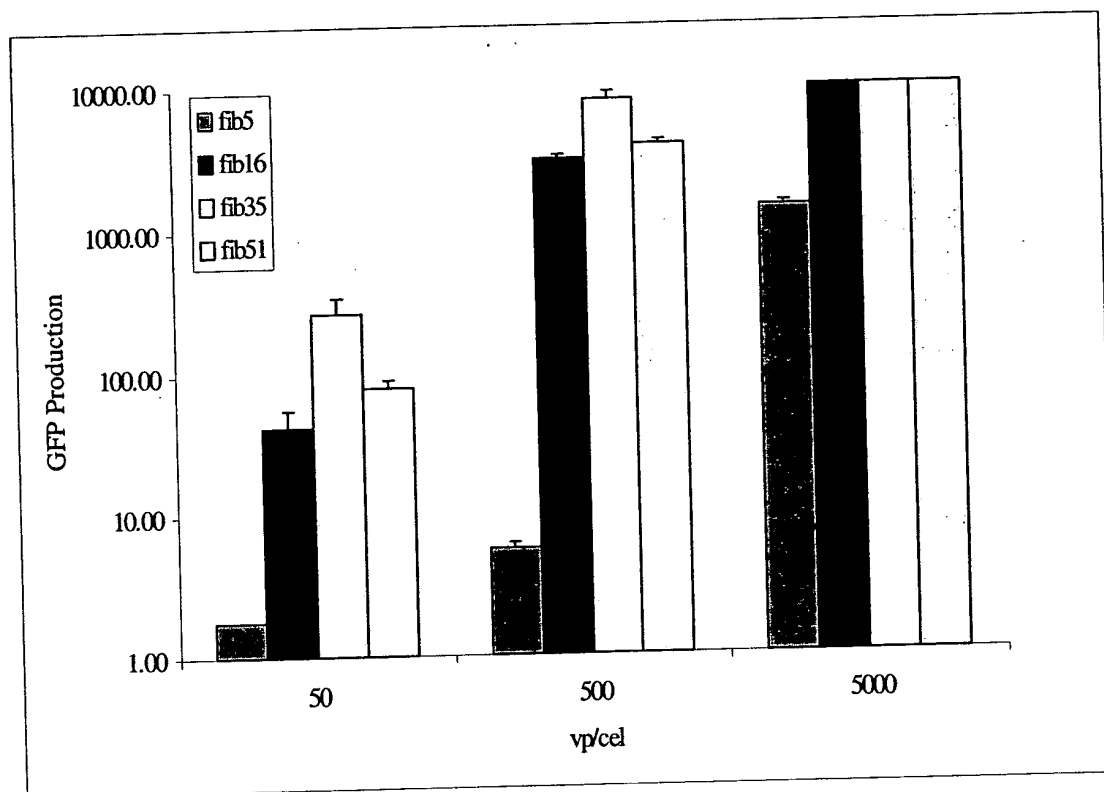
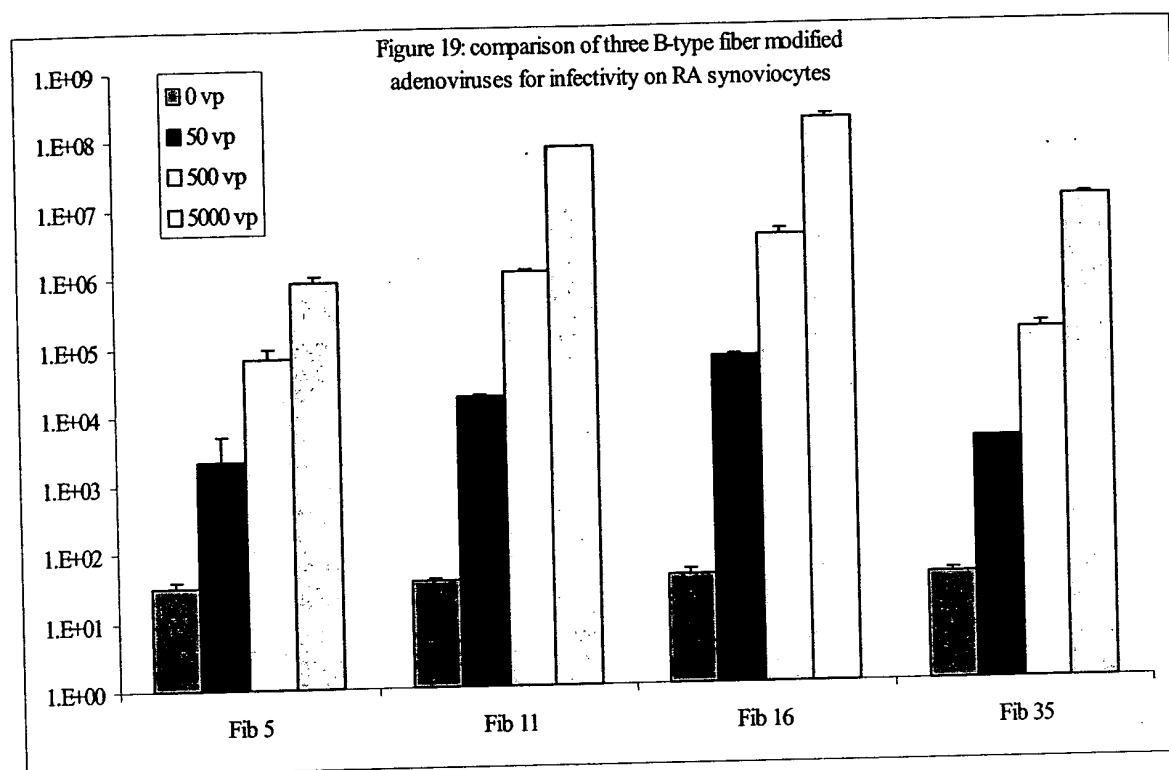


Figure 19



Bar graph showing the number of lacZ-positive cells (Y-axis, logarithmic scale from 1 to 10,000) for four conditions (X-axis) across six patients (P1 to P6). The conditions are Ad5-2hrs (white), Ad5-20hrs (black), Ad5.fib16-2hrs (stippled), and Ad5.fib16-20hrs (dark grey).

Patient	Ad5-2hrs	Ad5-20hrs	Ad5.fib16-2hrs	Ad5.fib16-20hrs
P1	~3	~30	~300	~3,000
P2	~40	~40	~250	~2,500
P3	~40	~150	~500	~8,000
P4	~40	~60	~500	~6,000
P5	~25	~150	~1,200	~10,000
P6	~30	~70	~500	~6,000

[illegible]